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Subject: Re: LMS ISA card compatibility

Posted by [Adveser](#) on Tue, 30 Nov 2010 21:36:20 GMT

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Wayne Parham wrote on Tue, 30 November 2010 13:11

Yes, but this is really an ISA buss timing issue, not a local buss or processor thing. Most of my career has been designing microprocessor-driven industrial controllers, and back in the days when the PC used the ISA buss, I designed several controllers that plugged into it.

Early microcontrollers made no distinction between local buss and processor buss - everything was on the same buss, nothing but switching logic and a single clock. Examples are the S100 buss and the ISA buss, as well as countless other proprietary busses that were essentially just connections to the microprocessor's address and data busses.

Add-on cards in early microprocessor systems sometimes had problems, especially if the processor was run at faster speeds. It wasn't long before the processor and buss were separated using newer buss architectures so you could run processor and local memory at high speed and slower peripherals could be run on an interface at their own speed. But the early ones weren't as sophisticated, and everything ran at the speed of processor clock.

That is interesting. Every time I used the software it was controlling the ISA bus too. The PLL chip is the master clock and I think every component in the computer has to use this clock as a master. Everything on the motherboard bus was affected in the case of a 2009 Sony Vaio and a 2000 Toshiba at least.

The sound card would not work for example if the Clock was set too high.

I'm sure things can be very different on a Tower than a LT though.

This is something one should only have to mess with if they have a laptop and a locked bios in any event.

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